

**Notice of Allowability**

Application No.

09/699,214

Examiner

Phirin Sam

Applicant(s)

LIFSHITZ ET AL.

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/03/2005.
2. ☒ The allowed claim(s) is/are 1,3-19,21-27,29-45 and 47-51.
3. ☒ The drawings filed on 27 October 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



**PHIRIN SAM**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### *Allowable Subject Matter*

1. The following is an examiner's statement of reasons for allowance:

**Regarding amended claims 1, 3, claims 4, 7, 11, and 12**, prior arts do not disclose a method for transmitting data, comprising a combination of:

- (1) dividing the overhead frame into a number of equal segments, each of the segments comprising a number of bits that is not an integer multiple of eight, wherein the one or more overhead bytes comprise a number of overhead bytes that is not an integer multiple of  $Q$ ; and encoding each of the segments as a symbol for transmission over a communication channel.

**Regarding amended claim 5 and claim 6**, the prior arts do not disclose a method for transmitting data comprising a combination of:

- (1) dividing the overhead frame into equal segments, each of the segments comprising a number of bits that is not an integer multiple of eight; and
- (2) wherein the one or more framing bytes comprise a number  $S$  of framing bytes in the overhead frame, and wherein dividing the frame into equal segments comprises dividing the frame into a number  $Q$  of segments, wherein  $S$  is not an integer multiple of  $Q$ .

**Regarding amended claim 8 and claim 9**, the prior arts do not disclose a method for transmitting data, comprising a combination of:

- (1) dividing the overhead frame into equal segments, each of the segments comprising a number of bits that is not an integer multiple of eight: and

(2) wherein the one or more error correction bytes comprise a number  $P$  of check bytes in the overhead frame, and wherein dividing the frame into equal segments comprises dividing the frame into a number  $Q$  of segments, wherein  $P$  is not an integer multiple of  $Q$ .

**Regarding amended claim 10**, the prior arts do not disclose a method for transmitting data, comprising a combination of:

- (1) dividing the overhead frame into equal segments; each of the segments comprising a number of bits that is not an integer multiple of eight;
- (2) wherein arranging the data in the overhead frame comprises generating a Reed-Solomon codeword, and wherein the error correction bytes comprise parity bytes of the Reed-Solomon codeword.

**Regarding amended claim 13**, the prior arts do not disclose a method for transmitting data, comprising a combination of:

- (1) dividing the overhead frame into equal segments, each of the segments comprising a number of bits that is not an integer multiple of eight;
- (2) wherein dividing the overhead frame into segments comprises determining the number of bits to be comprised in each segment responsive to a characteristic of the communication channel.

**Regarding amended claim 14, and claims 15-17**, the prior arts do not disclose a method for transmitting data, comprising a combination of:

- (1) dividing the overhead frame into equal segments, each of the segments comprising a number of bits that is not an integer multiple of eight;

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(2) wherein encoding each of the segments comprises generating symbols for transmission over a digital subscriber line (DSL) connection at a standard DSL symbol rate, and wherein arranging the data in the overhead frame comprises determining the quantity of the data and adding the overhead bytes thereto so that the data are transmitted over the communication channel at a transmission bit rate that is not a multiple of eight times the standard DSL symbol rate.

**Regarding amended claims 18, 21, and claims 22-26,** the prior arts do not disclose a method for transmitting data, comprising a combination of:

(1) dividing the overhead frame into a number of equal segments, such that the selected number of the overhead bytes is not an integer multiple of the number of segments, wherein the overhead bytes comprise a number S of framing bytes, wherein S is not an integer multiple of the number of the segments.

**Regarding amended claim 19,** the prior arts do not disclose a method for transmitting data, comprising a combination of:

(1) dividing the overhead frame into a number of equal segments such that the selected number of the overhead bytes is not an integer multiple of the number of segments;

(2) encoding each of the segments as a symbol for transmission over a communication channel.

**Regarding amended claims 27, 29, claims 30, 33, and 37-39,** the prior arts do not disclose a data transmitter, comprising a combination of:

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(1) an encoder, adapted to divide the overhead frame into a number  $O$  equal segments, wherein the one or more overhead bytes comprise a number of overhead bytes that is not an integer multiple of  $Q$ , each of the segments comprising a number of bits that is not necessarily an integer multiple of eight, and to encode each of the segments as a symbol for transmission over a communication channel.

**Regarding amended claim 31 and claim 32**, the prior arts do not disclose a data transmitter, comprising a combination of:

- (1) an encoder, adapted to divide the overhead frame into equal segments, each of the segments comprising a number of bits that is not necessarily an integer multiple of eight;
- (2) wherein the equal segments comprise a number  $Q$  of segments, and wherein the one or more framing bytes comprise a number  $S$  of framing bytes that is not an integer multiple of  $Q$ .

**Regarding amended claim 34 and claim 35**, the prior arts do not disclose a data transmitter, comprising a combination of:

- (1) comprising a number of bits that is not necessarily an integer multiple of eight, and to encode each of the segments as a symbol for transmission over a communication channel;
- (2) the equal segments comprise a number  $Q$  of segments, and wherein the one or more error correction bytes comprise a number  $P$  of check bytes that is not an integer multiple of  $Q$ .

**Regarding amended claim 36**, the prior arts do not disclose a data transmitter, comprising a combination of:

- (1) an encoder, adapted to divide the overhead frame into equal segments, each of the segments comprising a number of bits that is not necessarily an integer multiple of eight;

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(2) wherein the error correction encoder comprises a Reed-Solomon encoder, and wherein the error correction bytes comprise parity bytes of a Reed-Solomon codeword.

**Regarding amended claim 40, and claims 41-43,** the prior arts do not disclose a data transmitter which is coupled to transmit the symbols over a digital subscriber line (DSL) connection at a standard DSL symbol rate, the transmitter comprising a combination of:

- (1) an encoder, adapted to divide the overhead frame into equal segments, each of the segments comprising a number of bits that is not necessarily an integer multiple of eight, and to encode each of the segments as a symbol for transmission over a communication channel,
- (2) wherein the quantity of the data and of the overhead bytes added thereto is determined so that the data are transmitted over the communication channel at a transmission bit rate that is not a multiple of eight times the standard DSL symbol rate.

**Regarding amended claims 44, 47, and claims 48-51,** the prior arts do not disclose a data transmitter, comprising a combination of:

- (1) an encoder, adapted to divide the overhead frame into a number of equal segments, such that the selected number of the overhead bytes is not an integer multiple of the number of segments, and to encode each of the segments as a symbol for transmission over a communication channel,
- (2) wherein the overhead bytes comprise a number S of framing bytes, wherein S is not an integer multiple of the number of the segments.

**Regarding amended claim 45,** the prior arts do not disclose a data transmitter, comprising a combination of:

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- (1) an encoder, adapted to divide the overhead frame into a number of equal segments, such that the selected number of the overhead bytes is not an integer multiple of the number of segments, and to encode each of the segments as a symbol for transmission over a communication channel,
- (2) wherein the selected number of the overhead bytes is less than the number of the segments.

***Conclusion***

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on Mon-Fri, 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on (571) 272 - 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: March 25, 2005

A handwritten signature in black ink, appearing to read "Phirin", written over a horizontal line.

**PHIRIN SAM  
PRIMARY EXAMINER**